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=> d his

     (FILE 'HOME' ENTERED AT 17:04:19 ON 13 JUN 2008)
     FILE 'CA' ENTERED AT 17:04:30 ON 13 JUN 2008
L1  5395 S (PH OR ACID (5A) BASE) AND(SULFONAMIDE OR SULPHONAMIDE OR
         SULFADIAZINE OR SULFABENZAMIDE OR SULFACETAMIDE OR SULFISOXAZOLE OR
         SULFAMETHIZOLE OR SULFADIMETHOXINE OR SULFAPYRIDINE OR
         SULFAMETHAZINE OR SULFISOMIDINE OR SULFAMETHOXYPYRIDAZINE)
L2     9 S L1 AND DIMETHYLACRYLAMIDE
L3    40 S METHACRYLOYL CHLORIDE AND DIMETHYLACRYLAMIDE
L4    41 S (PH OR ACID (5A) BASE)AND DIMETHYLACRYLAMIDE AND POLYACRYLAMIDE
L5     1 S ((FIBER OR FIBRE)(3A) OPTIC? OR WAVEGUIDE)AND DIMETHYLACRYLAMIDE
         AND POLYACRYLAMIDE
L6     2 S ((FIBER OR FIBRE)(3A) OPTIC? OR WAVEGUIDE)AND L1
L7    86 S L2-6
L8    62 S L7 AND PY<2004
L9    11 S L7 NOT L8 AND PATENT/DT
     FILE 'BIOSIS' ENTERED AT 17:13:57 ON 13 JUN 2008
L10    6 S L8
     FILE 'MEDLINE' ENTERED AT 17:14:27 ON 13 JUN 2008
L11    4 S L8
     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 17:15:46 ON 13 JUN 2008
L12   77 DUP REM L2 L5 L6 L8 L9 L10 L11 (18 DUPLICATES REMOVED)

=> d bib,ab l12 1-77

L12  ANSWER 14 OF 77  CA  COPYRIGHT 2008 ACS on STN
AN   140:41159  CA
TI   A pH-sensitive sulfonamide-based indicator for food freshness
IN   Park, Sang-Kyu
PA   S. Korea
SO   PCT Int. Appl., 18 pp.
PI   WO 2003106995        A1    20031224    WO 2003-KR1167         20030614
     US 20050176151       A1    20050811    US 2004-516814         20041206
PRAI KR 2002-33520        A     20020615
AB   The present invention relates to a freshness indicator of foods, and
     more particularly, to a freshness indicator of foods using pH sensitive
     high mol. wt. substances which is capable of judging use (drinking)
     possibility, by indicating a quality of foods with the naked eye using
     phase shift due to an ionization difference of pH sensitive high mol.
     wt. substances which is sensitively reacted to pH of foods to be changed
     depending on the quality of the foods, regardless of the term of
     validity marked on the vessel.  The freshness indicator of foods
     comprises an ion and solvent through a hole in which an ion and solvent
     within foods to be changed depending on the quality of foods is formed
     such that it can be contacted with a pH sensitive high mol. wt.
     substance, a semipermeable membrane member being formed such that it
     passes an ion and solvent only through the hole, a filling layer for a
     pH sensitive high mol. wt. substance which is ionized or deionized by
     the ion and solvent being passed through the semipermeable membrane
     member and in which transparency/semitransparency phase shift occurs,
     and a transparency film member which is formed at the outside of the
     filling layer and is capable of judging a phase shift of filling layer
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with the naked eye. Also, the freshness indicator further comprises a freshness indication paper in which a character or a figure is formed between filling layer and semipermeable membrane member.

L12 ANSWER 31 OF 77 CA COPYRIGHT 2008 ACS on STN
AN 133:164490 CA
TI pH-sensitive polymer containing sulfonamide and its synthesis method
IN Bae, You Han; Park, Sang Yeob
PA Kwangju Institute of Science and Technology, S. Korea
SO U.S., 11 pp.
PI US 6103865 A 20000815 US 1998-219141 19981222
PRAI KR 1998-31572 A 19980803
AB There are disclosed pH-sensitive polymers contg. sulfonamide groups, which can be changed in phys. properties, such as swellability and soly., depending on pH and which can be applied for a drug-delivery system, bio-material, sensor, etc, and a prepn. method therefor. The pH-sensitive polymers are prepd. by introduction of sulfonamide groups, various in pKa, to hydrophilic groups of polymers either through coupling to the hydrophilic groups, such as acrylamide, N,N-dimethylacrylamide, acrylic acid, N-isopropylacrylamide, etc, of polymers or copolymn. with other polymerizable monomers. These pH-sensitive polymers may have a structure of linear polymer, grafted copolymer, hydrogel or interpenetrating network polymer.

L12 ANSWER 41 OF 77 CA COPYRIGHT 2008 ACS on STN
AN 131:5626 CA
TI Novel pH-sensitive polymers containing sulfonamide groups
AU Park, Sang Yeob; Bae, You Han
CS Center Biomaterials Biotechnology, Department Materials Science Engineering, Kwangju Institute Science Technology, Kwangju, 500, S. Korea
SO Macromolecular Rapid Communications (1999), 20(5), 269-273
AB Novel pH-sensitive polymers were synthesized by copolymg. a monomer derivatized from 4-amino-N-[4,6-dimethyl-2-pyrimidinyl]benzene sulfonamide with N,N-dimethylacrylamide. The linear copolymers showed pH-sensitive soly., while chem. crosslinked hydrogels exhibit a relatively sharp transition in swelling around physiol. pH. These changes were found to be reversible. By varying the type of sulfonamide and the copolymer compn., a new class of pH-sensitive polymers with a broad range of transition pH can be synthesized.

L12 ANSWER 45 OF 77 CA COPYRIGHT 2008 ACS on STN
AN 129:153158 CA
TI Novel pH-sensitive hydrogels with adjustable swelling kinetics
AU Akala, Emmanuel O.; Kopeckova, Pavla; Kopecek, Jindrich
CS Departments of Pharmaceutics and Pharmaceutical Chemistry/CCCD, and of Bioengineering, University of Utah, Salt Lake City, UT, 84112, USA
SO Biomaterials (1998), 19(11-12), 1037-1047
AB Novel pH-sensitive hydrogels were synthesized by copolymn. of N,N-dimethylacrylamide, N-tert-butylacrylamide, acrylic acid, 4,4'-dimethacrylamidoazobenzene (DMAB), and N-alkanoyl-O-methacryloylhydroxylamines. The influence of the length (and consequently hydrophobicity) of the alkanoyl (propionyl, hexanoyl, and

lauroyl), and its content in the hydrogel on the kinetics of swelling were investigated. Upon change in the pH from acidic to neutral, the N-alkanoyl-O-methacryloylhydroxylamine moieties were hydrolyzed. The rate of side-chain hydrolysis was dependent on the alkanoyl chain length and the content of the hydrolyzable comonomer in the network structure. Further, chem. control of kinetics of swelling was coupled to biophys. control of kinetics of swelling by synthesizing hydrogels contg. two types of crosslinking agents, one hydrolyzable (N,O-dimethacryloylhydroxylamine) and the other enzymically degradable (DMAB). The kinetics of swelling of crosslinked polymers was compared with the kinetics of hydrolysis of N-alkanoyl-O-methacryloylhydroxylamine moieties incorporated into linear sol. copolymers of similar structures. Colon-specific delivery with these hydrogels was discussed.

L12 ANSWER 57 OF 77 CA COPYRIGHT 2008 ACS on STN
AN 121:124263 CA
OREF 121:22161a,22164a
TI pH optrode
IN Northrup, M. Allen; Langry, Kevin C.
PA Electric Power Research Institute, Inc., USA
SO U.S., 9 pp.
PI US 5273716 A 19931228 US 1991-640484 19910114
PRAI US 1991-640484 19910114
AB Methods for fabricating pH-sensitive optrodes entail (a) covalently linking hydroxypyrenetrisulfonic acid, or its salts, to an acryloyl monomer through sulfonamide linkages formed by activating and reacting the acid (salt) sulfonate groups with ≥3 equiv of a diamine which are reacted with the acryloyl monomer to form an acryloyl-hydroxypyrenetrisulfonic monomer, (b) copolymg. the acryloyl-hydroxypyrenetrisulfonic monomer with acrylamide monomer to form a dye-acrylamide copolymer with the dye being covalently linked to form a dye-polymer matrix, and (c) shaping the copolymer to form a self-contained structure which is immobilized at the end of an optical fiber so that fluorescence from the dye is detectable via the fiber. The methods of forming the copolymers (steps a and b above) and the copolymers are also claimed.

=> log y
STN INTERNATIONAL LOGOFF AT 17:16:37 ON 13 JUN 2008

=> d his

(FILE 'HOME' ENTERED AT 11:46:01 ON 13 JUN 2008)
FILE 'CA' ENTERED AT 11:46:17 ON 13 JUN 2008
L1 109606 S (FIBER OR FIBRE)(2A)OPTIC? OR WAVEGUIDE
L2 421 S L1 AND(IMMOBIL? OR ATTACH? OR BOUND)(7A)(INDICATOR OR FLUOROPHORE OR DYE OR PIGMENT OR FLUORESC?(2A)(GROUP OR COMPOUND OR MOIETYOR MOLECULE))
L3 0 S L2 AND(SULFONAMIDE OR SULPHONAMIDE OR SULFADIAZINE OR SULFABENZAMIDE OR SULFACETAMIDE OR SULFISOXAZOLE OR SULFAMETHIZOLE OR SULFADIMETHOXINE OR SULFAPYRIDINE OR SULFAMETHAZINE OR SULFISOMIDINE OR SULFAMETHOXYPYRIDAZINE)

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L4    2152 S L1 AND(PH OR(ACID AND BASE))
L5     204 S L2 AND L4
L6      22 S L2 AND (ACRYLAMIDE OR POLYACRYLAMIDE)
L7     157 S L2 AND (POLYMER? OR COPOLYMER? OR POLY)
L8      85 S L5 AND L7
L9     119 S L5 NOT L7
L10     59 S L2 AND(MIRROR OR REFLECT?)
L11    188 S L4 AND(MEAT OR SPIOL? OR NH3 OR AMMONIA OR AMINE)
L12     24 S L2 AND L11
L13     38 S L11 AND (MEMBRANE OR POROUS)
L14    176 S L6,L8,L10,L12-13
L15    155 S L14 AND PY<2004
L16      7 S L14 NOT L15 AND PATENT/DT
     FILE 'BIOSIS' ENTERED AT 11:58:47 ON 13 JUN 2008
L17     13 S L15
     FILE 'MEDLINE' ENTERED AT 11:59:29 ON 13 JUN 2008
L18     12 S L15
     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 12:00:28 ON 13 JUN 2008
L19    165 DUP REMOVE L15 L16 L17 L18 (22 DUPLICATES REMOVED)

=> d bib,ab l19 1-165

L19  ANSWER 29 OF 165  CA  COPYRIGHT 2008 ACS on STN
AN   130:179614  CA
TI   Hydrophobic fluorescent polymer membrane for the detection of ammonia
IN   Munkholm, Christiane
PA   Chiron Diagnostics Corporation, USA
SO   PCT Int. Appl., 23 pp.
PI   WO 9908114          A1    19990218    WO 1998-IB1180         19980803
     US 6013529          A     20000111    US 1997-906711         19970805
PRAI US 1997-906711      A1    19970805
AB   The present invention provides an ammonia sensor comprising a pH
     sensitive fluorophore immobilized in a hydrophobic polymer, wherein the
     fluorophore can react quant. with ammonia and the transducing moiety of
     the fluorophore is neutrally charged when deprotonated.  The present
     invention also provides a method for detecting ammonia using the ammonia
     sensor and optical sensing devices comprising the ammonia sensor.
     Solns. of acridine orange, Et cellulose, and tetrabutylammonium hydrogen
     sulfate or tetrabutylammonium hydroxide were spin-coated onto glass
     substrates and cured.  All of the formulations produced coatings that
     were sensitive to ammonia.  The coatings prepd. with tetrabutylammonium
     hydroxide displayed more sensitivity to low concns. of ammonia.

L19  ANSWER 47 OF 165  CA  COPYRIGHT 2008 ACS on STN
AN   128:265403  CA
TI   Fiber-optic oxygen sensor based on the fluorescence quenching of tris(5-
     acrylamido-1,10-phenanthroline)ruthenium chloride
AU   McNamara, Kerry. P.; Li, Xueping; Stull, Angela D.; Rosenzweig, Zeev
CS   Department of Chemistry, University of New Orleans, New Orleans, LA,
     70148, USA
SO   Analytica Chimica Acta (1998), 361(1-2), 73-83
AB   Leaking of immobilized fluorescent indicators from the sensing matrix
     affect the stability of optochem. sensors and, therefore, presents a
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major problem in this field. When a polymer was used as a matrix support, a covalent bonding of the fluorescence indicator to the matrix eliminates the leaking problem. However, covalent bonding of the indicator to the support cannot be used as a general approach since it may modify the spectral properties of the indicator and its sensing response toward the analyte. This paper describes the synthesis of a modified Ru phenanthroline complex which is suitable for acryl copolymn. with acrylamide. The newly synthesized dye, tris(5-acrylamido-1,10-phenanthroline)ruthenium chloride, Ru(5-acrylamido-phen)3, maintains its full O response with a slight decrease in its quantum yield for emission. Leaking measurements show a significant improvement in the stability of fiber-optic O sensors that use Ru(5-acrylamido-phen)3 as an O sensitive fluorescence indicator, over previous fiber-optic O sensors that make use of other Ru diimine complexes for O measurement. The improvement in stability is particularly noticeable in samples of increased hydrophobicity.

L19 ANSWER 60 OF 165 CA COPYRIGHT 2008 ACS on STN (claim 3)
AN 124:197335 CA
OREF 124:36383a,36386a
TI Fluorescent Fiber-Optic Calcium Sensor for Physiological Measurements
AU Shortreed, Michael; Kopelman, Raoul; Kuhn, Michael; Hoyland, Brian
CS Department of Chemistry, University of Michigan, Ann Arbor, MI, 48109-1055, USA
SO Analytical Chemistry (1996), 68(8), 1414-18
AB A new optical sensor based on covalent immobilization of a newly synthesized calcium-selective, long-wavelength, fluorescent indicator has been constructed, with a response dynamic range optimal for physiol. measurements. Immobilization occurs via photoinitiated copolymn. of the indicator with acrylamide on the distal end of a silanized 125 μm diam. multimode optical fiber. The working lifetime of this sensor is limited only by photobleaching of the indicator. Due to the inherent hydrophilic nature of the acrylamide polymer, the response time of this new sensor is governed by simple aq. diffusion of the ionic calcium. This results in sensor response times fast enough to monitor some concn. fluctuations at physiol. rates. The ability to monitor calcium concn. fluctuations in a high background level of magnesium is also demonstrated with a calcd. selectivity of 10-4.5.

L19 ANSWER 96 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 120:181732 CA
OREF 120:31777a,31780a
TI Luminescent fiber optic sensor for the measurement of pH
AU Milo, Charles; Atwater, Beauford
CS Devices for Vasc. Intervention, Inc., Redwood City, CA, 94063, USA
SO Proceedings of SPIE-The International Society for Optical Engineering (1993), 1796(Chemical, Biochemical, and Environmental Fiber Sensors IV), 188-201
AB The fiber optic pH sensor described is based on a colorimetric pH indicator and a pH insensitive luminescent compd. co-immobilized in a hydrophilic polymer. The absorption spectra of the pH indicator and the luminescent compd. overlap. Consequently, the competitive absorption

between the pH indicator and the luminescent compd. results in modulation of the sensor emission intensity as a function of pH in the measurement media. The feasibility of this pH measurement technique is demonstrated with online testing of fiber optic sensors.

L19 ANSWER 98 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 119:134640 CA
OREF 119:24065a,24068a
TI Fiber optic pH sensor for gastric measurements - preliminary results
AU Netto, Eden J.; Peterson, John I.; Wang, Binseng
CS BEIP, NCRR, Bethesda, MD, 20892, USA
SO Proceedings of SPIE-The International Society for Optical Engineering (1993), 1886(Proceedings of Fiber Optic Sensors in Medical Diagnostics, 1993), 109-17
AB As the pH values in the gastric system vary from approx. 1 to 7, a combination of appropriate dyes to cover this broad range should be used. The pH colorimetric indicators bound in polyacrylamide microspheres and light-scattering particles are packed in a cellulosic dialysis tubing at the end of a pair of plastic optical fibers. The exptl. setup uses a CCD spectrometer as a detector and a 386 compatible personal computer. All parameters can be set by software. Results with both 1- and 2-dye pH sensors are presented.

L19 ANSWER 116 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 117:3816 CA
OREF 117:787a,790a
TI Reusable fiber-optic sensor
IN Berlin, Peter; Becker, Manfred; Guether, Reiner; Breitfeld, Dagmar; Schwachula, Gerhard; Feistel, Lothar
PA Akademie der Wissenschaften der DDR, Germany
SO Ger. (East), 20 pp.
PI DD 296757 A5 19911212 DD 1990-342978 19900723
PRAI DD 1990-342978 19900723
AB Fiber-optic (bio)sensors are described which contain a reagent phase separable from and optically coupled to the fiber optics, so that the reagent phase can be exchanged or replaced in a reproducible position relative to the fiber optics. The reagent phase contains immobilized biol. components and/or an indicator system, and its optical properties (absorbance, fluorescence, luminescence) change on exposure to the analyte. This arrangement reduces the cost of sensors which utilize irreversible reactions, unstable biol. components, etc., as the reagent phase may comprise a disposable component of the sensor. Thus, a crosslinked sulfated polystyrene bead 0.8 mm in diam. was shaken successively in solns. contg. N,N-diethyl-p-phenylenediamine-HCl (I; H2O2 indicator) and glucose oxidase, and washed. The bead was placed in a fiber-optic cuvette in which it acted as a lens which, together with a concave mirror, focused light emitted by the optic fiber back onto the tip of the fiber. On addn. of a glucose soln. to the cuvette, the change in absorbance of the bead due to I oxidn. by H2O2 formed in the glucose oxidase reaction was registered. Various configurations of the reagent phase are illustrated schematically.

L19 ANSWER 118 OF 165 CA COPYRIGHT 2008 ACS on STN

AN 115:269376 CA
OREF 115:45513a,45516a
TI A field-deployable dual-wavelength fiber-optic pH sensor instrument based on solid-state optical and electrical components
AU Jones, Thomas P.; Coldiron, Shelley J.; Deninger, William J.; Porter, Marc D.
CS Cent. Adv. Technol. Dev., Iowa State Univ., Ames, IA, 50011, USA
SO Applied Spectroscopy (1991), 45(8), 1271-7
AB The construction, operation, and performance characteristics of a compact, dual-wavelength, solid-state photometer and fiber-optic probe for use with absorbance-based thin-film chem. sensors are described. The instrument has been specifically designed for field deployment and uses low-cost components while maintaining a precision and accuracy comparable to fluorescence-based lab. sensors. The computer-controlled photometer employs red and green light-emitting diodes (LEDs) as fixed-wavelength light sources and silicon photodiodes as detectors, and has no moving parts. Graded refractive index lenses control light propagation through a beamsplitter in the photometer and through the fiber-optic probe. The beamsplitter directs light simultaneously onto a sample and a ref. detector in a double-beam in-space mode which compensates for fluctuations in the outputs of the LEDs. A chem. modified polymeric film is mounted on the fiber probe, and serves as an optical pH sensor. The previously described sensing film is constructed by the immobilization of the diprotic acid-base indicator Congo Red at a base-hydrolyzed cellulose acetate film and responds to changes in pH between 0 and 4.2. An absorbance-based internal calibration scheme, which takes advantage of the optical properties of each of the reactive forms of the immobilized indicator, is presented. The potential capability of this instrumentation, based on its small size and minimal need for calibration, to function as a durable low-maintenance pH sensor for onsite deployment in environmental monitoring applications, is discussed.

L19 ANSWER 123 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 115:222078 CA
OREF 115:37625a,37628a
TI Optical fiber pH sensor based on immobilized indicator
AU Cui, Dafu; Cao, Qiang; Han, Jinghong; Cai, Jine; Li, Yating; Zhu, Zemin; Fan, Jie; Gao, Ning
CS Inst. Electron., Acad. Sin., Beijing, 100080, Peop. Rep. China
SO Proceedings of SPIE-The International Society for Optical Engineering (1991), 1572(Int. Conf. Opt. Fibre Sens. China OFS(C) '91, 1991), 386-91
AB An optical fiber pH sensor which has the immobilized pH sensitive indicator dye reagents on the tip of the optical fiber was studied. The probe is made by covalently immobilizing the phenol red, bromine phenol blue or bromothymol blue on the polyacrylamide microsphere fixed by polytetrafluoroethylene (PTFE) film. A gap between the dye and optical fiber was used to make the diffusion of the hydrogen ion more easily. The parameters of the optical fiber pH sensor are given. The ranges of measurement are 3.0-5 pH 7.0-8.5 pH, 8.0-10.0 pH for bromine phenol blue, phenol red and bromothymol blue, resp. The sensitivity is 66.6 mV/pH. The probe has the precision better than 0.05 pH. The linear correlation coeff. is 0.999. The response time is 1-2 min. The

hysteresis is 0.52%. The repeatability is 0.013 mV while the stability is 0.015 pH/h.

L19 ANSWER 138 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 112:180570 CA
OREF 112:30551a,30554a
TI Polyacrylamide gels containing pH-sensitive bound dye indicators, and their preparation
IN Wunderling, Martin; Rupp, Lothar
PA Hewlett-Packard G.m.b.H., Fed. Rep. Ger.
SO Eur. Pat. Appl., 7 pp.
PI EP 336986 A1 19891018 EP 1988-105677 19880409
US 4987195 A 19910122 US 1989-324290 19890315
PRAI EP 1988-105677 A 19880409
AB The title gels, esp. useful in optical fiber pH probes with prolonged reliability, are prepd. by polymg. acrylamides in the presence of a indicator to form gels, and treating (or preconditioning) the gels with an aq. soln. until shifting of the pK value of the gels, due to the treatment, has finished. Thus, dissolving acrylamide 4.265, a bisacrylamide 0.0962, and phenol red 0.05 g in 10 mL water at 50°, cooling to 0°, adding persulfate, and holding at 40° for 7 h gave a gel, which was preconditioned with buffered L-lysine soln. to obtain a treated gel insensitive to bivalent cations.

L19 ANSWER 152 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 107:146373 CA
OREF 107:23399a,23402a
TI Ammonia-sensitive fiber optic probe utilizing an immobilized spectrophotometric indicator
AU Caglar, Perihan; Narayanaswamy, Romaier
CS Dep. Instrum. Anal. Sci., UMIST, Manchester, M60 1QD, UK
SO Analyst (Cambridge, United Kingdom) (1987), 112(9), 1285-8
AB The immobilization of an indicator dye reagent for the development of fiber optic probes for detecting ammonia vapor has been investigated. The indicator dye reagent bromothymol blue was immobilized on a hydrophilic polymer matrix and the concn. of ammonia in the vapor phase was detd. in the range 1.5 × 10-3 - 60 × 10-3 mol L-1 by reflectance measurements. Some possible interferences from other vapors were also investigated.

L19 ANSWER 156 OF 165 CA COPYRIGHT 2008 ACS on STN
AN 106:12011 CA
OREF 106:1963a,1966a
TI Fiber optic polymer-clad sensor
IN Welti, Neal Arthur
PA Monash University, Australia
SO PCT Int. Appl., 24 pp.
PI WO 8605589 A1 19860925 WO 1986-AU62 19860312
PRAI AU 1985-9834 A 19850320
AU 1985-3766 A 19851206
WO 1986-AU62 A 19860312

AB A sensor is described for detecting changes in or monitoring the level of an anolyte. This sensor contains an optical fiber cable having a sensing segment that is a film coating of a support matrix on the core of the optical fiber cable with any sheathing and cladding removed. The support matrix is a polymer material chosen to have an index of refraction similar to that of the core material of the optical fiber cable. An indicator compd. having spectral characteristics sensitive to the anolyte is immobilized on the anolyte-permeable support matrix. The sensor has a 2nd outer film coating of a material different to that of the support matrix. This sensor cladding material provides both optical and chem. insulation of the sensor segment from the environment being studied. There are multiple advantages to this sensor. Use of elec. signals, undesirable in an inflammable environment, are avoided along with the corresponding impedance effects. The indicator material is permanently bound within the permeable polymer coating and is not subject to loss by leaching into the medium. The polymer coating does not scatter light and so does not diffuse the signal. The sensor can be used in a variety of environments. The probe is robust with a long lifetime, and can be miniaturized or placed in a hypodermic needle or a catheter. With this sensor, NH3, CH3NH2, EtNH2, pH, or redox potential can be detd.

=> log y
STN INTERNATIONAL LOGOFF AT 12:01:39 ON 13 JUN 2008